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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/706,912

11/14/2003

Mitsutoshi Higashi

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21171

7590

10/05/2006

STAAS & HALSEY LLP

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EXAMINER

SCHILLINGER, LAURA M

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/706,912

**Applicant(s)**

HIGASHI, MITSUTOSHI

**Examiner**

Laura M. Schillinger

**Art Unit**

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of claims 1-9 in the reply filed on 11/02/05 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Peterson et al ('473).

Peterson teaches the following claimed limitations as cited below:

1. (ORIGINAL) An electronic device having mounted thereon a microelectromechanical system element comprising  
a micromachine component (100- see Applicant's own Background) and electronic component (24) for operation of said micromachine component (44) formed on a substrate (16), in which an operating space for said micromachine component is defined by said substrate (16) and a lid bonded covering an active surface of said substrate (32), (See Fig.3A)and  
said electronic component and wiring patterns of said lid (Fig. 5 (82)) are electrically connected at a bonded pad of said substrate (48) and said lid (50) (Fig.3A).

Art Unit: 2813

2. (ORIGINAL) An electronic device as set forth in claim 1, in which said bonded pad is an ultrasonic bonded pad of said substrate and said lid (Col.2, lines: 60-65- Applicant teaches same disadvantage in Applicant's specification).
3. (PREVIOUSLY PRESENTED) An electronic device as set forth in claim 1, in which said substrate and/or said lid further have a cavity at said operating space side (Fig.3A (36)).
4. (PREVIOUSLY PRESENTED) An electronic device as set forth in claim 1, in which said substrate and a lid having no wiring pattern further comprise, between them, an intermediate member provided with an opening for operation of said micromachine component and wiring patterns and said electronic component and the wiring patterns of said intermediate member are electrically connected (Fig.6C and D).
5. (ORIGINAL) An electronic device as set forth in claim 2, in which said substrate, said lid, and an intermediate member arranged between said substrate and said lid further comprise a second continuous ultrasonic bonded pad formed in contact with an outer periphery of said operating space side of said substrate and other members without interruption (Fig.6C and 6D (60)).
6. (PREVIOUSLY PRESENTED) An electronic device as set forth in claim 1, in which said substrate and/or said lid further comprise conductor-filled vias formed passing through them in a thickness direction (Fig.5 (90)).

Art Unit: 2813

7. (ORIGINAL) An electronic device as set forth in claim 4, in which said intermediate member further comprises conductor-filled vias formed passing through it in a thickness direction (Fig.6C and 6D).

8. (PREVIOUSLY PRESENTED) An electronic device as set forth in claim 1, which further comprises a bonded sealing resin surrounding an outside surface of said bonded pad (Fig.4A (48)).

9. (PREVIOUSLY PRESENTED) An electronic device as set forth in claim 1, in which a plurality of said electronic devices are those produced batch-wise at the same time by a wafer level package process (inherent-it is conventional in the semiconductor arts to produce packaged IC by batch).

### ***Response to Arguments***

Applicant's arguments filed 5/10/06 have been fully considered but they are not persuasive. Applicant argues that Peterson fails to teach nor suggest the wiring patterns of the lid are electrically connected to the electronic component at the bonded part between the substrate and the lid. However such arguments are not persuasive since layer 50 may be a solder alloy (Col. 7, line: 65)- and therefore would necessarily result in electrical connection.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

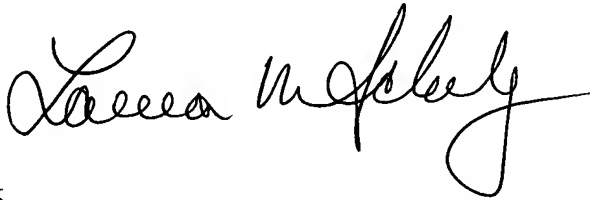
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2813

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Laura M Schillinger', with a stylized, flowing script.

Laura M Schillinger  
Primary Examiner  
Art Unit 2813

9/27/06